

Lesson: Operations Management

Conduct of Operations Course

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Operations Management

Time Required: 90 minutes

Reference: (a) DOE 5480.19, Conduct of Operations Requirements for DOE Facilities, Chapters 1, 5, 14, 15

Objectives: Upon completion of this lesson:

(VG-4-1)

1. Understand the requirements of DOE 5480.19 regarding operations management and administration at DOE facilities and associated impact on safety and efficiency of operations. (1.b)
2. Discuss the purpose and describe the roles and responsibilities of the technical manager in implementing DOE Order 5480.19, Conduct of Operations Requirements for DOE facilities. (2.a)
3. Discuss the concept of “graded approach” and how it applies to the implementation of conduct of operations. (2.j)

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4. Refer to a copy of DOE 5480.19 and locate applicable guidelines and requirements for specific activities. (1.a)

Instructional Aids/Materials:

1. Overhead projector, projection screen and viewgraphs
2. Instructor Guide and Student Workbooks
3. DOE-EM-STD-5505-96, Operations Assessments

Presentation Method: Lecture, Class Discussion

Instructor Notes:

1. Instructors should read the contents of this instructor guide and the student workbook, and review applicable portions of the listed references (as needed) when preparing for the lecture. Instructors are free to personalize, however, the key points made in the instructor guide must be covered.
2. The student guide is designed to promote note taking. There are many items in the student guides which do not have the corresponding information filled in, particularly, areas where guidelines are reviewed. The instructor should cover the corresponding information during the lecture and encourage students to take sufficient notes.
3. The italicized words are for instructors only and do not appear in the student workbook.
4. **VG** indicates that there is a viewgraph associated with the information and it should be displayed on the overhead projector.

I. Overview

(VG-4-2)

Management Responsibilities: To improve quality and uniformity of operations through the following methods:

- *Manage, organize and conduct operations in a manner which assures acceptable levels of safety;*
- *Ensure procedures are in place to control operations;*
- *Review existing and planned programs important to safe and reliable facility operations; and*
- *Assess the effectiveness of corporate directives, plans, or procedures.*

In order to fulfill these responsibilities facility management should perform the following:

(VG-4-3)

- Use the Order and Attachment I in the review and development of existing and proposed directives, plans, or procedures relating to the conduct of operations.
- Use a graded approach in the application of the guidelines provided in Attachment I to assure that the depth of detail required and the magnitude of resources expended for operations are commensurate with each facility's programmatic importance and potential environment, safety, and health impact.
- Document conformance with the requirements of this Order. As a minimum, a document (e.g. a matrix) shall be prepared in coordination with the Operations or Field Office Manager and the cognizant Program Secretarial Official(s) that:

- 1) *Indicates whether a specific guideline applies to a facility;*
- 2) *Indicates where and how each of the guidelines (Attachment I) of the Order are applied within the contractor's existing policies and procedures; and*
- 3) *Identifies any deviations or exemptions from the guidelines.*

(VG-4-4)

The Graded Approach Matrix is:

1. *Produced and submitted by the contractor*
2. *Approved by the DOE Operations Office*
3. *An agreement between the contractor and the DOE Operations Office on how the Order will be applied at the facility*

II. Guidelines

(VG-4-5)

- A. OPS O&A:** establishes the guidelines for publishing written standards, optimizing use of resources, measuring performance, and instituting expectations in the facility.
- **Operations Policies:**
Procedures or other definitive documentation specify policies for operations. These policies specify goals and the means for achievement. Operations personnel clearly understand their authority, responsibility, accountability, and interfaces with other groups.

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- Resources:
The operations supervisor is provided with sufficient resources (materials and personnel) to accomplish assigned tasks without excessive overtime by the operations staff.
- Monitoring of Operating Performance:
Operating activities are monitored so that problems can be documented and analyzed, and corrective actions can be implemented.

(VG-4-6)

Safety, Environment, and Operating goals are used as a management tool for improving performance and for measuring effectiveness in areas such as:

- . *minimizing the unavailability of safety systems;*
- . *minimizing personnel errors;*
- . *maintaining radiation exposure As Low As Reasonably Achievable;*
- . *minimizing the number of unscheduled facility shutdowns per year; and*
- . *minimizing waste*

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- Goals are:
 - 1) *auditable,*
 - 2) *measurable,*
 - 3) *realistic,*
 - 4) *challenging, and*
 - 5) *facilitate improvement.*

Inspections, audits, reviews, investigations, surveillance, and self-assessments of operating activities are performed to evaluate a facility's ability to meet its goals and to identify areas for improvement.

(VG-4-7)

- Accountability:
Workers and their supervisors are held accountable for operating performance. Personnel involved in significant or frequent violations of operating practices are counseled, retrained, and/or disciplined.
- Management Training:
Formalized supervisory and management training is incorporated into training programs.
- Planning for Safety:
Facility guidance exists which describes safety preplanning and explains the role of safety analysis reviews, job safety analyses, and the handling of safety matters. All operations personnel understand safety planning requirements.

(VG-4-8)

- B. Orders to Operators:** Provides a channel for management to communicate short term information and administrative instruction to operations personnel. This information tends to be “real time” and is related directly to the operation of the facility.
- **Content and Format:**
Orders should be clearly written, dated, and maintained in the control room. Information such as special operations, special data-collection requirements, and other similar short-term/non-permanent matters can be included in operator orders. Examples of orders include: instructions for performance of specific evolutions/tests; work priorities, and administrative information.
 - **Issuing, Segregating, and Reviewing Orders:**
Operator orders are issued by the operations supervisor or designee to communicate instructions to shift personnel. Operator orders are segregated into daily and long-term orders. Appropriate operations personnel review orders early in the shift and document their review by initialing the log or notebook.
 - **Removal of Orders:**
Orders that are no longer applicable or are outdated should be promptly removed or canceled. The operations supervisor should periodically review the operator orders to ensure that only applicable and current orders remain effective.

(VG-4-9)

C. Required Reading: Provides a channel for management to communicate important information related to operator job assignments and keep personnel informed of current facility activities. Includes: professional development, lessons learned, facility activities, or other pertinent matters.

- **File Index:**
A list of the types of documents to be included in the required reading file is maintained. The list includes: procedure changes; equipment design changes; and related industry and in-house operating experience information.
- **Reading Assignments:**
A method should be in place to designate which documents need to be read by the individuals filling each position, and the reading file should be readily available to those individuals.
- **Required Dates for Completion of Reading:**
A required completion date is designated for each reading assignment. Certain documents may be designated for “immediate reading”, and are read before assuming responsibility for a shift position.
- **Documentation:**
Completion of reading is documented, and documentation is retained.
- **Review:**
The reading file is periodically reviewed to ensure that all personnel complete readings as required. Material that has been read by all appropriate personnel is transferred from the active file to a “dead” file.

(VG-4-10)

D. Control of On-shift Training: Ensure on-shift training is effectively and safely conducted.

- Adherence to Training Programs:
On-shift training is conducted in accordance with training programs that specifically identify knowledge and performance criteria.
- On-shift Instructor Qualification:
On-shift training should be conducted by qualified operators. This may require the successful completion of appropriate instructor training.
- Qualified Operator Supervision and Control of Trainees:
Whenever trainees operate equipment, a qualified operator serving as an on-shift instructor observes the trainee closely and remains in a position to intervene or assume control.
- Operator Qualification Program Approval:
The operator qualification program is approved by line management, and changes to the program are coordinated with the training department.

(VG-4-11)

- Training Documentation:
Completion of the operator qualification program is formally documented.
- Suspension of Training:
Trainee operation of equipment is immediately suspended during unanticipated or abnormal events, accident conditions, or whenever else it is deemed necessary to ensure safe and reliable facility operation
- Maximum Number of Trainees:
A maximum limit for the trainee-to-instructor ratio will ensure that the trainee is provided with the most effective instruction and will ensure that the instructor is not distracted by having too many trainees.

NOTE: Have the students turn to page IV-7 (Module CONOPS review) in the Student Workbook, and refer them to the copy of DOE 5480.19 and its table of contents. Remind them of the specific chapters under review. Allow 20 minutes to complete the following questions. The questions are clustered together by chapters but do not follow the guidelines in sequence. Remind them to ask for help if they have ANY questions because —

THIS IS A REVIEW EXERCISE AND NOT AN ATTEMPT TO DETERMINE THEIR LEVEL OF KNOWLEDGE IN THE CONDUCT OF OPERATIONS GUIDELINES.

At the end of this period, discuss the answers to the questions with the class. You may do this in any way you choose as long as you ensure that the correct answer in the Instructor Guide is discussed and that the review is completed in the time allotted (Attempt to obtain as much student participation as possible).

II: CONOPS Review

You are the operations supervisor at a DOE facility. A member of your staff recently conducted an assessment of operations. She submitted a report with several deficiencies, but forgot to identify what requirements were not being met. Below is the list of deficiencies. For each deficiency, identify what Order requirement(s) are not being met.

DEFICIENCY 1:

Operating goals are not used as a management tool for improving operating performance. The operations manager does not publish operating goals, performance indicators, etc. for use by operators and foremen.

(Page I-16, Ch. 1, guideline 1)

"Procedures or other definitive documentation should specify policies that are to be applied for operations. These policies should specify goals and the means to achieve these goals."

(Page I-17, Ch. I, guideline 3)

"Goals should be auditable, measurable, realistic, and challenging, and promote improvement."

DEFICIENCY 2:

Roles and responsibilities are not clearly defined. Position descriptions do not accurately reflect the current duties of operations personnel. This results in certain necessary activities not being accomplished.

(Page I-16, Ch. 1, guideline 1)

"Responsibilities for implementing policies, including shift personnel, if applicable, should be clearly defined. Operations personnel should clearly understand their authority, responsibility, accountability, and interfaces with other groups."

DEFICIENCY 3:

There is no requirement for shift supervisors to have management or supervisory training. Two of three shift supervisors have not had supervisory training.

(Page I-18, Ch. I, guideline 5)

"Formalized supervisory and management training should be incorporated into training programs. This is especially important to the first-line supervisors on shift and should aid them in managing shift activities."

DEFICIENCY 4:

Supervisory tours are not effectively identifying operational problems. There were examples of improperly installed scaffolding and ladders, loose tools lying at old job sites, and rusted pipes and valve carcasses stuffed behind equipment.

(Page I-17, Ch. 1, guideline 3)

"Line managers and supervisors should perform routine observations of personnel performing operating activities. Deficiencies identified should be documented, trended, and corrected."

DEFICIENCY 5:

Facility guidance which describes safety planning requirements for all operational activities does not exist.

(Page I-18, Ch.1, guideline 6)

"Facility guidance should exist which describes safety preplanning requirements for all operational activities."

DEFICIENCY 6:

Facility supervisors and operators are not aware of required reading requirements. They could not respond whether the program existed in their area.

(Page I-83, Ch. 14, guideline 2)

"A method should be in place to designate which documents need to be read by the individuals filling each position, and the reading file should be readily available to those individuals."

DEFICIENCY 7:

The Required Reading file is not being periodically reviewed to ensure that all Power Plant personnel complete the reading by a designated date. Additionally, material that has been read by Power plant personnel is not being removed on a regular basis and as a result the reading file is comprised of old and sometimes out of date information.

(Page I-84, Chap. 14, guideline 5)

"The reading file should be periodically reviewed to ensure that all department personnel complete readings by the required dates. Material that has been read by all appropriate personnel should be removed from the active file."

DEFICIENCY 8:

There is not a system in place to ensure that operators have read procedure revisions contained in the required reading file prior to using the procedures.

(Page I-84, Ch. 14, guideline 3)

"Certain documents may be designated for immediate reading. These should be read before assuming responsibility for a shift position."

DEFICIENCY 9:

The system in place at the facility does not ensure that the operators receive the information in a timely manner. The operators are not required to review the shift orders prior to beginning their shift nor are they required to attend the briefing where the orders are discussed.

(Page I-86, Ch. 15, guideline 2)

"Appropriate operations personnel should review the orders early in the shift and document their review by initialing the log or notebook."

DEFICIENCY 10:

Shift orders are used to change or modify existing procedures.

(Page I-85, Ch. 15, guideline 1)

"The operators order program should not be used to change operating procedures, because the changes noted in the operator orders may be missed by a procedure user."

DEFICIENCY 11:

A review process for standing orders has not been established. Only one of four standing orders has been initialed by facility personnel.

(Page I-86, Ch. 15, guideline 2)

"Reviews of long-term orders may not be required on a daily basis but should be made periodically.... Appropriate operations personnel should review the orders early in the shift and document their review by initialing the log or notebook."

NOTES